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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,768	02/22/2002	William T. Chen	11042-005	2722
20583	7590	01/08/2004		
JONES DAY 222 EAST 41ST STREET NEW YORK, NY 10017			EXAMINER BARR, MICHAEL E	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,768

Applicant(s)

CHEN ET AL.

Examiner

Michael Barr

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) 22-42 and 64-79 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☒ Claim(s) 43-46, 48-57 and 59-61 is/are rejected.
- 7) ☒ Claim(s) 47, 58, 62 and 63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 05/02.
- 4) ☐ Interview Summary (PTO-413) Paper No(s), _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 1-21 and 43-63 in Paper filed 12/2/2003 is acknowledged.
2. Claims 22-42 and 64-79 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper filed 12/2/2003.

Priority

3. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on application 200101072-7, filed in Singapore on 2/23/2001. However, the applicant's Oath/Declaration and the first line of the specification make reference to application 2001010172-7, filed in Singapore. The foreign priority application number referenced by the applicant's Oath/Declaration and specification does not correspond to the copy of the foreign application supplied by the applicant. This merely appears to be a typographical error. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date. Also, amendment to the specification, correcting the application number of the foreign priority document is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 43-46, 48-57, and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hidber et al. in view of the article by Boonekamp et al. ("Boonekamp").

Hidber et al. teaches forming metal features on a substrate, such as polystyrene, by providing a stamp, immersing the stamp in a colloidal solution of Pd particles, removing the stamp from the solution which provides a layer of the particles on the raised portions of the stamp, drying the stamp by blowing nitrogen over the stamp, applying the stamp to a substrate surface, which deposits the particles onto the substrate surface in selected areas, and then electroless plating the selected areas of the substrate (Col. 12, lines 18-54; Col. 16, line 53-Col. 18, line 45). Hidber et al. teaches that the substrate can be chemically modified with a silane

treatment to facilitate adhesion of the Pd particles to the substrate (Col. 8, lines 48-59; Col. 17, lines 15-22).

Hidber et al. teaches that the colloidal Pd solution can include aqueous stabilized Pd cluster systems or Pd embedded in a polymer (Col. 12, lines 18-53). Hidber et al. does not specifically teach that the Pd colloid system is a polymer stabilized Pd system. However, the mentioned teachings of Hidber et al. would suggest that polymer stabilized Pd colloid solutions would be suitable. Boonekamp teaches activating a substrate surface for electroless plating with an aqueous Pd colloid solution, where the colloid solution is stabilized with polyvinylpyrrolidone (Pgs. 4089-4090). It would have been obvious for one skilled in the art practicing Hidber et al. to use the polymer stabilized Pd colloid solution of Boonekamp as the Pd colloid activation solution, with the expectation providing the desired electroless plating activation in Hidber et al., since it is shown by Hidber et al. that aqueous stabilized Pd cluster systems or Pd embedded in polymer systems are suitable and by Boonekamp that polymer stabilized Pd colloids are known and used in the art for electroless plating activation, as the polymer stabilized Pd colloid system of Boonekamp reads on the aqueous stabilized Pd cluster systems or Pd embedded in polymer systems sought by Hidber et al.

Hidber et al. does not teach heating the stamp or substrate in the step of applying the stamp to the substrate. However, the claim is broad enough to merely read on exposing the stamp or substrate to ambient conditions which "heats" the stamp and substrate to temperature ambient temperature.

Hidber et al. does not teach removing some of the catalytic particles from the stamp prior to application to the substrate. However, since Hidber et al. teaches dipping the stamp into the

colloidal Pd solution and then removing the stamp from the colloidal solution, it would have been expected that excess colloidal solution would have dripped from the stamp upon removal, and thus read on the claimed removing some of the catalytic particles from the stamp prior to application to the substrate.

Allowable Subject Matter

7. Claims 1-21 are allowed.
8. Claim 47, 58, and 62-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art cited or reviewed by the examiner teaches the claimed process were the stamp having the catalytic particles on the raised region causes a corresponding indented region in the substrate during application of the stamp to the substrate, or where the substrate or stamp is heated to around or above the glass-transition temperature of the substrate during application of the stamp to the substrate, or that the step of removing the particles from the stamp include the claimed application of the adhesive to the stamp.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Barr whose telephone number is 571-272-1414. The examiner can normally be reached on Monday-Thursday 6:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Michael Barr
Primary Examiner
Art Unit 1762

A handwritten signature in black ink, appearing to read 'Michael Barr', with a long horizontal flourish extending to the right.

MB
December 29, 2003